INDEX TO THE FOURTY-FIFTH VOLUME

OF THE

MINING JOURNAL.

MEETINGS.

Assheton, 32, 708; Almada and Tirito, 679, 1324, 1376; Alltami Colliery, 126, 183; Albert New Mill, 155; Alderley Edge, 239; Alamillos, 403, 1128, 1153; Ambrose Lake, 487; Aruba Island, 431; Aberdare and Plymouth Ironworks, 931; An tioquia, 1128, 1322; Australian Mines Investment, 1323; Australian Central, 1432; Australian, 845.

Brynambor Lead, 23, 54; Blue Hills Tin, 31, 403, 763, 1080, 1434; Belstone, 127, 958; Bronfloyd, 155; Basyc Consolidated, 239; Bog Lead, 265, 707; Bilson and Crump Meadow Collieries, 291; Bremer, 318, 1388; Brookwood, 320, 819, 1324; Bedford Consols, 347; Bedford United, 348, 819, 1351; Bolivar Railway, 374; Binn's Patent Endless Band, 569; Botallack, 572, 1294; Birdseye Creek, 791, 818; Blue Tent, 818, 1376; Bettws Llantwit Colliery, 902, 941; Bagworth Colliery, 988, 1153; Battle Mountain, 1156, 1184; Bampfylde, 1266, 1333; Blaen Caelan, 1328.

Colonial Bank, 31, 743; Cook's Kitchen, 193; Conglog Sulphur and Copper, 328; Cariggan Rock Tin, 320; Carn Brea, 155, 572, 932, 1294; Cathedral Tin, 128; Chesterfield and Derbyshire Mining, Civil, and Mechanical Engineers, 40; Chontales, 487, 1324, 1350; Chapel House Colliery, 649, 735; Cape Breton, 688; Caegynon Lead, 81; Caldbeck Fells, 193, 265; Cardiff and Swansea Coal, 680, 762, 847; Cesena Sulphur, 347; Canadian Copper Pyrites and Chemical, 734; Clee Hill Colliery, 124; Co operative Credit Bank, 496; Cornwall and Devon Miners' Association, 438, 1023; Cornwall Minerals Railway, 968; Crenver and Wheal Abraham, 269, 300, 542; Consolidated Land and Investment Corporation, 542; Central Swedish, 734; Clifton Silver, 744, 1184; Cape Copper, 762; Colorado Terrible Lode, 790; Clogau, 1128; Cakemore Colliery, 1265; Cedar Creek, 1408, 1433; Chicago, 1433.

Drake Walls, 22, 543; Devon Great Consolidated, 596, 1323; Denbighshire Consolidated, 127, 183, 1184, 1211; Deer Park, 319, 430; Diamond Rock Boring, 264; Don Pedro North del Rey, 412; Dolcoath, 320, 650, 988, 1324; Dyliffe, 265; Duchy Great Consols, 594; Dubby Syke, 688.

East Chiverton, 32, 1408; East Pool, 55, 543, 791, 1265; East Nant-y-Mwyn, 211, 290; East Van, 348; East Llangynog, 459; Economic Life Assurance, 845; Eclipse Gold, 328, 356; English and Australian, 211, 237; Exchequer Gold and Silver, 153; Elbe Colliery, 402; Emma, 496, 744, 1265, 1361; Elias Martyn and Sons, 552; Ebbw Vale, 687; Eberhardt and Aurora, 705, 1405.

Fitzroy Bessemer, 32, 211; Flagstaff Silver, 153, 345, 486, 828; Frank Mills, 193, 572; Fortuna, 403, 431, 1128, 1153; Frontino and Bolivia, 1128, 1322; Fuller's Reef, 1153, 1435.

Great Caradon, 23, 604; Great Snowden Mountain, 99, 347, 430; Great Western Colliery, 265; Great Wheal Lovell, 319, 1265; Great Australian Gold, 328; Great Wheal Vor, 375, 708, 1079; Great Laxey, 403, 429, 1080, 1154; Great Lovell, 764; Great Snaefell, 1351; Grogwinion Lead, 32, 127, 846; Glaisdale Whinstone Quarry, 496, 772; Glasgow Caradon, 128, 153; Glan Clwyd Lead, 238; Glen Lead, 300; Governor and Company of Copper Miners in England, 402; Gunnislake, 239, 688, 1211; Gauley Kanawha Coal, 458; General Mining, 468, 1321; Gorsedd and Merllyn, 514; Gawton Copper, 515, 1044; Glengariff Iron Ore and Harbour, 734; Gold Run Hydraulic, 931; Glyngwillim Colliery, 1210; Gorsedda Junction and Port Madoc Railways, 1407; Grosvenor Lead, 1407.

Hingston Down Consols, 541; Herodsfoot, 688, 1211; Huntington, 735; Henry Briggs, Son, and Co., 988; Hornachos, 1079.

Institution of Mechanical Engineers, 114, 826; Independence Gold Quartz, 401, 901; Ifton Rhyn Collieries, 1126; Ibstock Colliery, 265, 319, 968; Industrial Iron and Coal, 391; Imperial Brazilian, 604, 1238, 1377; Imperial Brazilian Collieries, 649; Iron and Steel Institute, 327, 494, 523, 994, 1045.

Javali, 374, 486, 1136, 1239. [1183

Kingston Consols, 183, 622; Kirk Michael, 238; Killaloe Slate, **Llangennech Colliery**, 488; Llay Hall, 248; Llanarmon, 21, 902; Llanidloes Lead, 347, 1323; London and County Banking Company, 138, 874; London and California, 154, 901; Lovell, The, 154, 210, 687, 1265; Lanestosa, 1079; Last Chance, 155; Ladywell, 515; Levant, 847, 1305; Littledean Woodside Coal, 211, 571, 1323; Linares Lead, 403, 431, 1128, 1153; Lusitanian, 430; Llanrhaiadr, 552; Llynvi Tondu and Ogmore, 939; Llynvi Valley Colliery, 1266; Last Chance, 1266.

Malpaso Gold Washing, 22, 1406; Marke Valley, 55, 412, 791, 1155; Medlyn Moor, 22, 1080; Melindur Valley, 99, 1154; Mid-Wales Lead, 141; Mid Moonta, 210, 290; Midland Institute of Mining Engineers, 144, 807; Mueld Argoed Colliery, 182; Mwyndy Iron Ore, 183; Merrybent, the, 210; Marbella Iron Ore, 239, 264; Manchester Geological Society, 416; Monydd Gorddu, 651; Manx, The, 874; Malabar, 1433.

New Quebrada, 21, 623, 1322; New Guinea, 213; New Hendra, 32; New Zealand Kapanga, 717; New Prince of Wales Slate, 100, 902; New Charlston Collieries, 459; New Pembroke, 128; New Sharlston Collieries, 291; New Fowey Consols, 137; New Hobb's Hill, 238; New Rosario, 1184, 1350; New Pacific, 1388; New Consols, 1435; New Chiverton, 1435; Nangiles, 22; National Provincial Bank of England, 542; Nant-y-Glo and Blaina, 1378; Nerbudda Coal and Iron, 460, 486, 818; Newfoundland, 153, 374; Newport Abercarn Black Vein Steam Coal, 183, 791; North Staffordshire Coal and Ironmasters' Association, 40; North Staffordshire Mining Institute, 144, 630; North Prince Patrick, 99, 137; North Pool, 155, 239, 272; North America Gold, 318, 845, 903; North Laxey, 429; North Levant, 1294; North Treleigh Wood, 604; North Crofty, 687; Norton Green Coal, 126.

Old Talargoch Lead, 21; Old Treburgett, 219; Oregon Hydraulic Gold, 959, 988; Original Hartlepool Collieries, 220; Oakwell Collieries Company, 542, 596.

Pelrose, 23, 403, 1080; Penhalls Tin, 31, 763, 1436; Prince Patrick Lead, 127, 846; Port Phillip and Colonial, 128, 154; Providence, 128, 572; Padeswood United Coal, Cannel, and Iron, 153; Phosphor Bronze, 239; Planet Silver, 403; Prince of Wales, 403, 854, 940; Pestarena, 843, 871; Parys Mountain, 687; Pennerley, 708; Pedn-an-dres, 735; Plynlimmon, 763; Patent Gunpowder, 819, 837, 931, 1294; Pateley Bridge, 1081; Penstruthal, 1349; Panuleillo, 1294; Pontgibaud, 1341.

Rica Gold, 22, 1406; Rossa Grande Gold, 32, 375; Rio Tinto, 468; Rookhope Valley, 514, 735, 875, 1154, 1239, 1323; Roman Gravels, 515; Richmond Consolidated, 543, 570, 1408, 1433; Russian (Vyksounsky) Ironworks, 1230; Russia Copper, 1377; Ruby Consolidated, 1436.

San Pedro, 790; Santa Barbara, 1239; Scottish Australian Mining Company, 542, 1376; Scottish Australian Investment, 4, 1350; Snowdrift Silver Mining and Reduction, 21; Spearn Moor, 32, 903; Silver Plume, 238; Silkstone Fall Colliery, 328, 988; Sierra Buttes, 402, 1126; Standhill Lead, 572; Skerne Ironworks, 679; South Caradon, 22, 547, 679, 1351; South Roskear, 22, 543; South Carn Brea, 35, 430; South Ward, 81, 460, 846; South Staffordshire and East Worcestershire Institute of Mining Engineers, 106, 504, 631, 742, 826; South Staffordshire Mill and Forge Managers' Association, 335; South Crofty, 193, 552, 932, 1294; South Wales Colliery, 219; South Roman Gravels, 1044, 1210; South Prince Patrick, 338; South Darren, 735, 903; South Great Work, 238, 402, 902, 1407; South Frances, 688, 1156; South Aurora, 265, 597, 622; South Tolcarne, 272, 829, 1378; South Cleveland Ironworks, 347, 735; South Condurrow, 319, 763, 1210; South Llanharran Colliery, 320; St. Dennis Consols, 137; St. Agnes Consols, 210, 319, 623; St. Patrick, 348; St. Lawrence, Victoria, and Valentine, 515; St. John del Rey, 707, 1408; St. Just, 1294; Stephen Roe Diffusive Daylight Reflector, 376; Spanish Hematite Iron, 248, 514; Sweetland Creek, 707

Tincroft, 155, 487, 572, 932, 1294; Tecoma Silver, 290, 487, 1376; Tretoll Tin and Iron, 319; Tharsis Sulphur and Copper, 328, 486; Teesdale, 604, 1128; Tankerville, 621; Tyllwyd, 875; Trebeigh Consols, 1183, 1376; Tulima, 1406.

Unity Wood, 239; Utah Silver-Lead, 458, 1051, 1388; United Mexican, 514, 1238.

Victoria (London), 128, 153; Van Railway, 239, 932; Van, The, 320, 346, 524, 622; Vancouver Coal and Land, 571, 1249.

Wayne's Merthyr Steam Coal and Ironworks, 54, 515, 1351; Willoughby, 1239; Welsh Freehold Coal and Iron, 300, 1044, 1080; Welsh Steam Coal Collieries, 819, 1266; Wicklow Copper, 430, 1128, 1163; Wheal Uny, 4, 328, 679, 966; Wheal Crebor, 55, 402, 874; Wheal Agar, 300, 1155; Wheal Peevor, 301, 764, 1052, 1128; Wheal Grenville, 4, 347, 1276, 1324; Wheal Goginan, 385; Wheal Owles, 543; Wheal Wrey, Ludcott, and North Trelawny United, 708; Wheal Kitty (St. Agnes), 346, 687, 1128; Wheal Basset and Grylls, 1184; Wheal Russell, 1361; Whitehaven Iron, 412, 468, 1052; West Chiverton, 23, 31, 459, 885, 1407; West Godolphin, 31, 487, 932, 1378; West Goginan Silver-Lead, 55, 290, 328, 846; West Frances, 194, 536, 552, 968; West Wheal Seton, 211, 687, 1164; West Tolgus, 239, 488, 688, 1211; West Maria and Fortescue, 320, 1239; West Mostyn, 1127; West Jewell, 375; West Bryn Celyn, 1407; West Esgair Lle, 650, 829; West Millwr, 1434; West Tankerville, 874; West Craven Moor, 1351, 1378; West Wheal Gorland, 968; Western Andes, 1052; Wye, 320, 1043.

Yorke Peninsula, 901; Ynisawdre Coal, Coke, and Brick, 1108.

CORRESPONDENCE.

"A" and "B" Consols, 885, 930, 958, 986
Abandoned Cardiganshire Mines, A. Francis, 1348
Air engines, compressed, for tramways, 372
American copper market, the, Sanders Brothers, 56
— slate trade, the, R. L. Williams, 207
— mining, R. Knapp, 787, 816
— mines, W. F. Rae, 983
Andre's "Mining Engineering," 1179 [871, 899, 927
Anthracitic coal of Dementa, in the Italian Alps, W. P. Jervis,
— coke, utilisation of anthracite slack, A. Vassarel, 1403
Arsenic, 71; manufacture of, 124; 316
Australian and Tasmanian tin ore, A. G. English, 19
— tin mines, 71; 287
— Mines Investment Company, 1263
— mining, 1321
Auditors of mining companies, 873, 930, 986
— fees, and the Grogwinion Company, 957
Babb and Pactolus Mining Company, J. L. Pond, 596
Bampfylde Mining Company, Endean and Co., 48; W. A. Thomas and Co., 56
Bellavista Silver and Lead Mining Company, C. van Nes, 1123
Beddgelert, and its slate quarries, 209
Bensberg Lead Mining and Smelting Company, 288
Birmingham (Blakeley Hall) Coal and Ironstone Company, 48, 289, 344, 1067, 1095, 1123
Blasting powder in collieries, 676, 731, 946, 983, 1095
— in coal mines in pillar and stall and long wall work, 1151
Blast furnace tuyeres, F. H. Lloyd, 1151
Blende mines of Cardiganshire, on the, A. Francis, 1375
Blow-pipe scale for measuring the weight of globules of silver or gold, 929, 946; E. Gledhill, 984
Blanzy Collieries, and the Darlington borer, 703
Boring machinery, 371; the Darlington, 771; 1292; H. Waddington, 1319
Bonanza mines of Nevada, 1319
Boiling Well Mine, 931
British mining, 931
Buddles for tin dressing, convex *v.* concave, T. H. Allen, 899
Bullion in America, buyers of, J. E. Schwartz, 316
Camp Floyd Quicksilver Mines, W. Bredemeyer, 704
— district—English mine agents, H. Sewell, 920
Canada, the mineral resources of, 180
Cape Copper Mining Company, 19, 33, 47, 71, 80, 108, 136, 165, 180, 264, 299, 456, 677, 703, 759, 1068, 1403
Californian Mines, and British capitalists, 1291, 1319
Caldbeck Fells Consolidated Lead and Copper Mining Company, 543, 641; P. Hawke, 1099
Cardiganshire and Montgomeryshire mining, A. Francis, 958
Cardiff and Swansea Steam Coal Company, H. R. Evans, 640,
Caribou Silver Mines, C. S. Richardson, 428 [872
Carmarthenshire Anthracite Coal and Iron Company, 1208
Cesena Sulphur Mines, Italy, E. Gledhill, 288
Central Swedish Iron and Steel Company, 1319
Channel Tunnel—land and water carriage, 151; scientifically and commercially considered, 123, 236; W. Austin, 288; 1071, 1098; W. Tregay, 458; J. De la Haye, 1040
— bridge, the, 539, 1219
Clee Hill Colliery Company, 48, 72, 125; W. Bertram, 180; W. H. Harrison, 209 [Cazin, 1263
Clifton Silver Mining Company, 732, 733, 788, 899; F. M. F.
Coal for Birmingham, 235, 264, 490
— cutting by machinery, A. Thomas, 371; "Monitor" and "Pick," 427; "Pick" and "Rotary" systems compared, I. G. Bass, 456, 539, 595, 647, 676, 703; W. Firth, 483, 539, 567, 610, 647, 676, 703, 787; 511; J. Parker, J. Tait, 539; E. Oxnard, E. Hoggins, 567, 619; W. Maddison, 676; J. S. Alexander, 731
— cutting machinery in England and America, J. S. Alexander, 983; W. Firth, 1019
— mining in Scotland, 1180, 1236
— under the Severn, 1375
— beds of East Canyon and Rush Valley, 483
— mining on the Kanawha, 540
— in New South Wales, R. Adams, 647 [871
— beds of East Canyon and Rush Valley, W. Bredemeyer,
— the utilisation of slack, W. A. Lyttle, 899
Colliery working—balanced hoisting ropes, 371
— accidents, and the lessons they teach, 816
— and iron companies, the new, 1039
— explosions, 1403
Colliers' wages in relation to coal prices, 686, 731
— sliding scale, the, J. B. Huntington, 1097, 1095, 1123
Committees ignorant of mining, E. Skewis, 152 [428
Companies, how some are formed, Harvey, Jordan, and Co.,
Compound differential pumping-engine, and the Royal Cornwall Polytechnic Society, H. Davey, 1068
Consolidated Virginia and California Silver Mines, examination of by the California Mining Bureau, J. Berton, 151
Copper ore, treatment of, J. P. Wilkes, 4 0
— mining in South Australia, 340
— pyrites, Spanish, 568
— the world's supply of, 817
— mining on Lake Superior, 928, 988, 1041, 1151, 1179
— mining in Devonshire, 1134
— mining in Cornwall, 1292
Cornish mining during the past year, 4; and improvements, 98; profits of, 151; C. Bawden, 237; 264; present aspect of, 373; 512
— German, and American mine agents, 236, 288, 289
— tin and copper mining, R. Tredinnick, 441
— mine management, 1124 [1431
— mining—its evils, and their remedies, 1180, 1237, 1264,
— pumping engines, 1263
Council to adventurers, G. Budge, 930
Cotteswold ironstone, the, 1291 [Symons, 289; 569
Crenver and Wheal Abraham United Mines, 30, 182; R. Cwm Dwyfor Mine, R. Symons, 20
Devonport Mining Company—mining in Utah, 19
Devon Consols, the, 661
Divining rod, the, W. Tregay, 789, 844, 937, 1042; 817, 885; R. Symons, 873, 937, 984, 1069, 1124; E. Skewes, 973, 1097, 1124; T. Welton, 909; 928, 984; T. Harvey, 1041; T. Spargo, 1893, 1264; philosophy of the, 1182
Diamond and percussive borers, 703
— rock boring, 676
— the, W. White, 704, 848, 900, 930, 1096
Dowsing and divination, 203, 1152, 1151, 1209, 1236, 1292, 1319
Doubtful minerals, double nomenclature, 371
Don Pedro Mining Company, 373, 399, 428
Draining mines—steam pumps, 873
Drake Walls Mine, 987
Dues, reduction of, E. Skewis, 621
Dynamite and powder, 568, 1207, 1235, 1263
— is it dangerous, 620
Easter egg, a hard-boiled, 372 [548; 956
Eberhardt and Aurora Mining Company, 541; H. Sewell,
— and Richmond—market anomaly, 1219
Dynamo-electric blasting apparatus, Siemens Brothers, 1291
East Wheal Lovell, and its management, 48
— Brookwood and Burchetts Copper Mine, Buckfastleigh, G. Sparke, 237
— Chiverton Mining Company, 885
— Pool Mine, 1072
Efficiency and economy—Cornish mining, R. Tredinnick, 484
Electricity, What is? E. Gledhill, 47
Emma pamphlet—second edition, J. Roberts, 620
— Mine, and the Howland Tunnel, H. Sewell, 704
— Mine—future policy, 1291, 1319
English mine agents, 957, 986, 1071, 1098, 1123
Eureka Consolidated Company, J. D. Emmersley, 788
Explosions in Collieries, prevention of, J. Warburton, 759; 1431
"Ex Nihilo Nihil Fit," 181
Explosives used in blasting, H. Waddington, 343; O. Webb, 371, 400; 427; S. Williams, 455, 512; 484, 1493
Exploring parties in pits, protection of, H. Sewell, 1431
Fire at sea, extinction of, 47
— great, in Virginia City, 1235
Flagstaff Silver Mining Company, 96, 126; and Tecoma, 524, 596; 788, 816, 872, 899; T. Goldsworthy, 957
Flint-shire lead district, W. A. Thomas, 985, 1125, 1151
Foreign mines, and British capital, B. Anthony, 182; 1207, 1235
Frieberg ore district, observations on the, H. Cookesley, 540
Fronllwyd Mine, T. Morris, 789
Frontino and Bolivia Gold Mining Company, 1375, 1403, 1432
Fuller's Reef Gold Mining Company, V. Nissen, 179; R. Waters, 287; J. Walker, 299
Fuel economisers, J. Casartelli, 928
Gannal el, two days at the feet of, 760
Gas machines for mines, 568
Gauley-Kanawha Coal Company, D. T. Ansted, 567
German *v.* Cornish agents, 373
Gold and silver mines of Gilpin county, Colorado, C. S. Richardson, 207
— Company (The), Limited, Wales, C. Reilly, 318, 1042
— extracting of from auriferous pyrites, C. J. Harvey, J. Walker, 373
— deposits, electrical influence in, H. Marshall, 456
— in North Wales, 678 [1292, 1319, 1347, 1404, 1431
— in Wales, T. A. Readwin, 844, 929, 1042, 1096, 1208, 1236
Great Snowden Mountain Copper Mines, E. Spargo, 125
— Goyalton Mine, 125
— Lixey Mining Company, 457; J. Dearden, 541; 1125
Grogwinion Lead Mining Company, G. Bedford, 1210
Gwennap mining district, R. Symons, 1181 [986
Halkyn drainage scheme, A. W. Thomas, 929; J. S. Houston,
Hematites of Devon, the, 485
Henwood, W. J., the late, 957
Heroism, true, J. A. Stirling, 1039
Hingston Down Mining Company, T. B. Laws, 513
Hydro-Dynamic engine, Truss's, 1039
Imperial Brazilian Collieries, 1235
Independence Gold Mining Company, 136
Ingot of Cymric copper, 456
Investments in mines, G. Budge, 733, 817
Invention of the safety-lamp, 1151, 1236
Inventor of the steam blast-pipe, T. Hackworth, 1151
Iron industries of Cumberland, R. Meade, 95; of Lancashire, 179; of Durham and Northumberland, 235; West Riding of Yorkshire, 343; of Derbyshire, 399; of North Staffordshire, 455; of Shropshire, 675; South Staffordshire and Worcestershire, 770, 815; of Monmouthshire, 910, 975
Iron, red and brown hematite, Ippleden, South Devon, G. Sparke, 98
— ore in Australia, A. G. English, 124
— and coal in New South Wales, R. Adams, 236
— trade, the, valuable suggestion, 483
— and coal deposits at Wallerawang, 540
— tamping bars, S. Williams, 987
Javali Mine, the, 72, 126, 152, 182, 207, 237, 264, 289, 318, 344; T. B. Laws, 401, 457, 568; and Chontales, 595, 622, 633, 648, 678, 704, 760, 816, 1068, 1123
John Bagnal and Sons, 648
Lanzi Mines, Tuscany, E. Sunderland, 48
Lawyers as auditors of mining companies, 833
Last Chance Silver Mining Company, 956
Lead smelters and tin smelters, A. Francis, 399; 513
— mining in the county of Gloucester, 401; W. C. Randolph, 428; 457
— mining in Derbyshire, 428
— mining in the Halkin Mountains, 1136, 1164
— mining in Flintshire, 1237
— and blende, separation of, 1209, 1237; J. Ellery, 1263, 1432
— mines, rating of, where dues are paid in kind and in money, R. Jasper More, 1263
Legitimate mining, and what is implied therein, R. Knapp, 208
Limited companies, and legitimate mining, C. Kneebone, 987
Llandilo Silver Lead and Blende Mine, T. Spargo, 958; 987
Lodes, ancient discovery of, E. Skewes, 733, 788, 817; J. Roberts, 760; P. W. Flower, 788
London Financial Association, 843
Lyttle's metallurgical patents, W. A. Lyttle, 1070 [263, 289
Machinery as applied to the underground working of mines,
Marke Valley Mine, 458, 485, 930, 958; A. T. James, 987
Metals, extraction of, from their ores, T. Clarke, 124; 152
Metallic veins, formation of, J. Lean, 1293
Metallurgical process, improved, 1039, 1070
Meteorology, 47
Metropolitan gas monopoly, C. G. Clemenshaw, 648
Minerals, doubtful, double nomenclature, &c., 372, 816
— resources of Ireland, J. Penrose, 568
— resources of Canada, 677
— ground in Cornwall, undeveloped—resuscitation of deep abandoned mines, C. Bawden, 1209
— separation of, J. Jewell, 14 3
Mineralogy, educational, T. A. Readwin, 873
Mineralogical Society, a, 934, 1068, 1180
Mining on the Pacific Coast—Nevada, J. D. Power, 19, 47, 71, 96, 123, 315, 648, 677, 703, 732, 759, 787
— in the Pacific States, D. E. Mellis, 95, 299; 124, 247
— in Utah—the Devonport Mining Company, 19; 927
— hindrances to successful mining, E. Skewis, 20, 98, 125
— successful and unsuccessful, S. Clarke, 20, 237; 72; T. H Allen, 98, 152, 208, 264, 317, 373; E. Skewes, 181, 264; 289, 344; H. Knapp, 401; 457
— accounts—the thirteenth month, 20
— in Queensland, 71, 97, 179, 287, 384, 512, 567, 704, 872, 1067, 1123, 1179, 1347, 1403
— auctions, 72 [Adams, 96; 207, 511, 956
— in New South Wales—its sudden rise and depression, R.
— successful, near Holywell, 98
— claims in America, H. Syme, 207
— in Australia, J. Hunt, 207; 872
— theoretical and practical, R. Knapp, 317, 372, 427
— in the Aberystwith district, S. Trevethan, 400
— in Cardiganshire, A. Francis, 400, 958; S. Trevethan, 1264, 1321, 1375, 1404
— investments—why are they unpopular? 401
— in Combmartin, North Devon, J. Treweek, 458, 621
— and metalliferous industries, labour in connection with,
— shares, 513 [483
— in Tasmania, J. Hunt, 539, 1235
— in Cornwall—the meetings, 596; T. Mitchell, 1152
— at Combmartin, 649; J. Treweek, 678; 705
— in Mid-Cornwall, 649
— the magnitude of in Nevada, J. Berton, 732
— remarks on, R. Knapp, 733, 761
— practical—machine and hand labour, G. W. Denys, 844
— in Michigan—Lake Superior, 844
— in India, 871
— on Lake Superior, 956, 1068
— reports and accounts, S. H. Emmens, 986
— and mine management, 986
— investment and mining speculation, 1043
— economical, 1069 [mainder of 1875, 1075
— and the metal trade, the prospects of during the re-
— districts, improvements in, 1210
— in New South Wales, R. Adams, 1291
— in St. Just, 1349
Mining interests of England and Wales, R. Tredinnick, 1375
— as an investment, 1404
— industry of North Wales, 1431
Mine agents' reports, 457, 649
— reports—the Van, 568, 621
— surveying, R. Knapp, 631
— audits, 957
— management, economy in, 1043
— burrows, old, T. J. Barnard, 1098
Mines and mining, 485
— and mining at Lake Superior, 872
Miners' Association, advantages of a, W. Teague, jun., 458
— hours of labour, R. Symons, 485
— safety-lamps and lights, 933
— Association of Cornwall and Devon, J. H. Collins, 1068
Money and finance, R. Tredinnick, 941
Motive power, a new, 1151
Nascent process, the, 19; and Crenver and Wheal Abraham United, 48; 71, 97, 125, 180; C. W. Adams, 927; S. H. Emmens, 957, 1042, 1097; T. J. Barnard, 985, 1070; 1043, 1070; Nevada mines, the, 1179 [G. Evens, 1097, 1124
New West Rosewarne, J. Y. Watson, 33; G. Heap, 72
— Great Consols, R. Symons, 72 [R. Adams, 96; 512
— South Wales, mining in—its sudden rise and depression,
— Quebrada Mining Company, 287, 552, 1347
— Rosewarne Mining Company, R. Symons, 289
— Fowey Consols, 289
— works at New Consols, W. H. Lucas, 373; 401
— Consols Tin and Arsenic Works, 1349, 1375
— Zealand progress of, 460
— Wheal Lovell, T. Spargo, 1264
— Rosario Mining Company, 677; M. Hearn, 704
Newfoundland Mining Company, Merriman, Powell, and Co., 345 [595, 1319
Nickel, cobalt, and chrome iron mines of New Caledonia, 567,
Northampton iron trade, the, 278; iron ores, F. D. Taylor,
North Tankerville Mining Company, 289 [317
— of England Mining and Mechanical Engineers, visit of to Yorkshire, 1134, 1162, 1191
Nova Scotian gold fields, facts concerning the, 399
— mining news, 617
Oak Ball Day in Graniteshire, 619
Oil metallurgy, new system of, H. Wurtz, 1040
Olive branch to South Wales, an, 371 [the, 124, 152
"Original Correspondence" in the *Mining Journal*, remarks on
Past year, the—Cornish mining, 4 [315
Pacific Coast, mining on the, J. D. Power, 19, 47, 71, 96, 123,
— Coast mining laws, J. D. Emmersley, 315
— States, mining in the, D. E. Mellis, 95, 124, 299, 247
Park of Mines, 181
Patentees, cautions to, 180
Patent Laws, amendment of the, F. W. Campin, 237
Patents for Inventions Bill, 1875, 596 [1071, 1320
Pateley Bridge Lead Mines and Smelting Company, T. Sykes,
Pictou coal field, 567, 844, 1067
Plunger poles, inverted, R. Knapp, 568 [648, 760
Port Phillip and Colonial Gold Mining Company, 512, 541, 569,
Prince of Wales Mine, 428, 457, 485, 931
Property Trust, the, 182
Providence Mines, the, E. Trythall, 208
Presentation to Mr. J. G. Green in Penusylvania, D. Uren, 983
Quicksilver extraction in Sarawak, H. Bankhart, 123
Queensland, mining in, 384
Railway accidents, prevention of, J. Walker, 47, 192
— carriages, intercommunication in, 872
Railways and tramways, J. Walker, 98
Ravenglass and Eskdale Railway, R. Symons, 289
Richmond Consolidated Mining Company, G. Hopkins, 4, 299; 19, 180, 264; J. D. Power, 287; T. H. Hall, 316, 344; J. Martin, 512; 524, 541; A. H. Westaway, 620, 788; 759, 816; 928, 1040, 1068, 1179, 1207, 1235, 1263, 1291, 1403, 1432
Richmond and the St. John del Rey Mines, 648, 677, 678
Rock drills, 19, 97; McKean and Co., 108, 192, 220, 263, 271, 299, 565; 151, 180; G. W. Denys, 208, 263, 316, 344; H. Waddington, 236, 288, 316, 371; C. Harwood, 236; T. A. Warrington, 236; W. Wasley, 288; 400, 676; J.
— progress in the Sutro Tunnel, 1095 [Garland, 1041
Road locomotives for tramway traction, 427
Roman Gravels, 99, 126, 485, 621, 1417
Rookhope Valley Mining Company, E. Rogers, 705
Rosewall Hill and Ransom United Mines, 485
Royal College of Science for Ireland, 456
Rough notes on Cornish mining, 844
Ruby Consolidated Mining Company, A. Aikman, 816
Russian sheet-iron, 983
"Scipio," and the Pennerley Mine, 1181
Ships' water-lines, 568
Sierra Buttes Mines, 800 [1042, 1125.
Silver and blende mining—the Llandilo districts, C. Kneebone,
— mining in Peru, W. T. Rickard, 1179
Soudley Ironworks, Morrison, Beauclerk, and Co., 899
South Eskdale Mine, R. Symons, 48
— Wales, and the Great Western Railway, 254
— Wales collieries, the, 317
— Bwadrain Mine, S. Roberts, 401
— Australian mines and railways, J. B. Austin, 1096
— Frances Mine meetings and reports, R. Goldsworthy, 428, 485, 569; 458; A. T. James, 513
— Caradon Mine—management, 1043
— Yorkshire miners, and their employers, W. Firth, 595
Strikes and lock-outs—capital and labour, R. Tredinnick, 317
St. Agnes Consols, 385, 513, 524
St. John del Rey Mine, 456, 936
St. Patrick Mine, 457, 513, 569, 621, 817
St. Just Amalgamated, 1349
Steam traction on tramways, 1375
Sub-marine railway between England and France, J. de la Haye, 151
Surface drainage, 513
Sulphur in coal, T. L. Phipson, 647
Suttro Tunnel, progress of the, 1179
Tasmania, the tin mines of, R. Adams, 1095
Tecoma Silver Mining Company, 96; and the Utah Silver Lead Concentration Works, 315; W. H. Harrison, 401, 704
Technical education in relation to mining, J. Roberts, 317, 373; 401
Terrible Lode Company—mining in Colorado, E. Le Neve Foster, 620, 704, 816; 648
Terras Mine, R. Symons, 1099
Tharsis Company, the, and Mr. Henderson, 512
Thornhill Reef Mining Company, 47
Thorp's Gawber Hall Colliery *v.* Chapel House Colliery, 1095
Tin, on Australian and Tasmanian, A. G. English, 19
— refuse, utilising—burnt leavings, 98
— mines, hints for investors in, 181
— Australian—total yield for 1874, 484
— deposits of Tasmania, 484, 1095; J. Hunt, 1123
— mining in Queensland, 732
— in New South Wales, 928
— market, the, 1108
Tintang Consols, R. Symons, 1099 [Seccombe, 98
Tolbenney Iron Mines, St. Stephen's, Cornwall, 72; C. W.
Truss's patent hydrodynamic engine, 1097
"Twelfth-Cake," a leaden, 97 [541, 569
Tyllwyd Mining Company, D. Forrest, 356; 401, 426, 457, 485,
Utah and Flagstaff Mines, T. A. Bennett, 47.
— the mines and mining districts of, B. A. M. Froiseth, 1225
Vancouver Coal Mining and Land Company, 595
Vigra and Clogau Gold Mines, J. Remfry, 1304
Volumetric analysis, 1347 [of to mines, 484
Water question, the—surface drainage, 152, 1151; supplying
— and compressed power for mining by machinery, 759, 771
— courses, diversion of, 1099
West Tolgus Mine, 48
— Seton, and other mines, 99 [125, 1180
— of England Fire-Clay, Bitumen, and Chemical Company,
— Chiverton Mine, G. Sharp, 631, 661, 772, 833, 1108, 1181; 789, 800; H. Mansell, 817, 873; R. Southey, 845
— Esgair Lle, Crown, Ystytty, and Van Consols, A. Frances, 789; 873
— Godolphin Mine, 987 [1330, 1375, 1404; awards, 1431
— Maria and Fortescue, 1072; a visit to, 1181; 1237, 1903,

Poldice Mine, R. Symons, 1293
gold mines, 181, 344
mining news, 649
— limestone and granite quarries, 781
Whitehaven Iron Mines, R. Symons, 48
Whiddon United Mines, Ashburton, Devon, G. Sparke, 318
Wheal Whisper, R. Larchin, 48 [W. Tregay, 126
— Mary Tin Mine, St. Dennis, 56; T. Parkyn, 98, 188, 192;
— Agar, and its management, 99, 818
Owles, 1043
— Crebor, J. Goldsworthy, 428; 437
— Wrey, Ludcott, and North Trelawny, M. W. Rawden, 514, 734; 937, 1264, 1341, 1349
— Owles, R. Boyns, 569
— Uny, and the late engineers, W. Rich, 1071, 1093, 1124
— Grenville, 1264; F. G. Lane, 1293; T. B. Laws, 1320; 1321, 1349, 1375, 1405; T. Ellery, 1432
— Jane, 485
Wire tramways, W. Carrington, 1179
Willoughby Lead Mine (in liquidation), 1405
Wichita Copper Mining Company, 437
Wind power, for mines, 568 [287
Wotherton Mine, the, 152, 181; J. Yelland, W. Bowsted, 209;

MISCELLANEOUS.

Air in mines, measuring, J. Dickinson, 1414
Ammonia, the production of, 1172
American Railroads—railway iron, 86
— adventures and misadventures, 114
— Iron and Steel Association, 279
— coal trade, the, 404
— railway enterprise, and English capitalists, 1219
— pumps, 573, 625
— iron trade, disasters in the, 1170
— charcoal iron sent to England, 633
— metallurgy, 744
Analysis, proximate organic, 357
Aneroyd, Davis's mining and surveying, 933 [1100
Anthracite coke in South Wales, manufacture of, W. Hackney,
Arsenic, annual returns of, 48; trade, the, 1349
Arbitration in the Northumberland coal trade, 306
Art reproduction in cast-iron, 495
Assaying, practical, by easy methods, 441
Automatic crane brake, 1213
— ventilation, 1311
Auriferous gravel banks of California, the great, 1078
— ores, treatment of, M. Attwood, 1379
Austria, and the East, 196
Australian railway enterprise, 24
— affairs and progress, 995
— mining, T. Dicker, 1349
Avalling and Porter's steam road boiler, 939
Basalt, and its effects, 270
Bank of California, failure of the, 949, 975, 1034
Baker's rotary pressure blower, 1352
Bain Dredger Company, formation of, 1113
Belgium iron exports, 38
Beechworth Gold Mining Company, formation of, 225
Bignall Hill Colliery explosion, 40
Birmingham, and its new coal field, 87
Black Rock Colliery Company, 1164
Blast furnaces, improvements in—the closed hearth system, 292; the working of, 1058 [Rooks, 1107, 1139
Blasting experiments at Cauldon Low, 550; at the Trow
— in mines, 974
Bloomer and Co., formation of, 1112 [the, 337
Blowpipe, practical guide to the determination of minerals by
Bohemian brown coal in 1872, 278
Boiler furnaces, improvements in, E. Schmitz, 489
— and tube-testing pumps, 625
— explosions, and boiler inspection, 714
Brentwood Brick and Coal Company, formation of, 85, 223
British chemical trade—its past, present, and future, 135, 165, 191, 772
— and American steam navigation, 586
— enterprise, and American coal and iron mines, 678, 732
— investment, the course of, as effecting the mining interest, 743
— manufacturing industries, 1380
— lead mines—Mr. Murchison's new work on, 1365, 1393.
— trade: or certain conditions of our national prosperity, 1165
Bryn Alyn Lead Mining Company, formation of, 1001
Broomhill West Hartley Colliery, Northumberland, notes on, 1396
Bullion product of the Pacific States, 165
Bunker's Hill Colliery explosion, 658, 638
Carboniferous strata, Dr. Gossart, 307
Cardiff and Swansea Steam Coal Company, 638, 750, 862
Cape Copper Mining Company, 715, 1072
Canadian Oil Wells Corporation, 820
California mines, and English capital, 1170
Canal project for Birmingham, a new, 1228
Californian mines, and British capitalists, 1275
Calamities in our collieries, the, 1366
Cannock and Rugeley Colliery, 1406
Charcoal, artificial—inflammability of charcoal, 933
Channel Tunnel, cost of the, 142, 419
— steam ferry, 1240
— bridge, the, 474, 1219
Chandor light, the, 107
Chapel House Colliery, 9, 137, 638; T. Thompson, 1207
"Champion" rock borer, Ullathorne and Co., 545, 736, 1115
Chemical and geological essays, Dr. T. Sterry Hunt, 152, 172
— analysis, commercial handbook of, 440
Chronology of recent geology, 255
Cogan Gold Mine, a visit to, 1137
Cleveland, and the World's iron trade, 410 [806
Coal and iron in the United States, 28, 115, 198, 225, 502, 513,
— getting without gunpowder, 40
— exports, our, 62, 1086
— mining in Japan, 85
— the workable depth of, Prof. B. Dawkins, 184 [440
— resources of our colonies, P. L. Simmonds, 164, 192, 318,
— trade in Australia, 170, 722
— important borings for, 226
— in Germany, 227 [Colliery, 308
— cutting machine, in Yorkshire, 227; trial of at Rainton
— mining, European, 334
— cutter, the Monitor, 335, 348
— fields of New South Wales, 355, 1086
— of Victoria, 355
— mining districts, progress of our, 362
— trade, the Americans, 404
— in Scotland, 419, 1207 [Staffordshire, 438
— an interesting surface working of the thick, of South
— further discoveries of, in Staffordshire, 1003 [1295
— cutting by machinery, 474, 806; A. Maddison, 928; 1236,
— in Nova Scotia, 558 [885
— and iron industries of the North, 580, 612, 639, 770, 843,
— and the making of iron, 602
— trades, disputes in the, 636
— fields of China, 686
— trade prospects, 694
— Australian, Indian, and English, 722
— decreased consumption of, 750
— improved consolidated, 834
— utilisation of slack, 862
— Mines Regulation Act, certificate of competency, 930
— consolidated, J. Bellamy, 928
— question, the, 974
— in America, 997
— in Norway, 1058
— and Iron—our increasing trade in them, 1002
— the working of, 1086
— mining, practical treatise on, G. G. Andrea, 1135
— industry of the North of England, 1170
— English in France, 1170
— and iron in the North of England, 1282 [Gold, 1338
— the thick, various methods of working in the Midland
— abroad, our, 1422
Colliers' house or allowance coal, 382, 393
— offences, and the Employers and Servants Acts, 1310
Collieries, lighting of with gas, 170
— and ironworks in China, 184
Colliery explosions, 10; and the weather, 24; Bignall Hill, 40; Aldwarke Main, 40; 1394
— explosions in North Staffordshire, 502, 558
— accident funds, 254
— investments, 306
— safety lamps, 610
— explosions, and their prevention, 610, 722, 778
— and ironworks boilers, 974
— fatality in Shropshire, 1030
— accidents, prevention of, 1142
— accidents in October, and their lessons, 1226
Cock Hill and Sunside Lead Mines, 109, 111
Comstock Lode, the, 101; Bonanza, Nevada, 299, 402
Commerce in tin, copper, and lead, our, 30
Commercial affairs in Peru, 890
— treaties, and the mining and metal trades, 1254
Copper miners, tables for, 6
— ores, the treatment of, 327 [Hunt and Douglas, 847
— silver, and gold ores, mixed, new method of treating,
Cornican Mining Company, formation of, 113
Cornish mine machinery in Mexico, 356
Coltsmar basaltic rocks of South Staffordshire, 428
Colorado Terrible Lode Mining Company, 715
— deep mining in, 1212
Coke manufacture, present condition of the, 86
Compressed air for underground haulage in mines, 1256
Conference to keep up miners' wages, 474
Cornwall Mineral Syndicate, 144
— notes on the geology of, 411
Cotton gunpowder, experiments with at Faversham, 137, 579
Coverack Granite Company, formation of, 569
Crenver and Wheal Abraham, 329
Crown Fire Insurance Company, formation of, 1360
Cyclops blower for furnaces, 1331
Cwm Gorse Colliery Company, 1024
Darlaston Steel and Iron Works, 559
Deflection theory, the—tides and waves, A. Tyler, 221
Desilverisation of lead—the Gwillim process, 1030
Diamond swindle, the, libel case, 86; the trial, 100
— Fuel Company, the, 86, 1117
— rock boring, 667
Dictionary of Chemistry, H. Watts, 1135
Directors, important judgment affecting, 1294
Dispute in South Wales, the, 1114
— serious, between miners and their leaders, 1282
Dinas Slate and Slab Company formation of, 945
Dowsing and divination—Jacob's rod, 196, 219
Downie, the late Mr. J., Glasgow, 439
Draining mines by non rotatory steam appliances, 522
Dynamite, 376, 947
— trade, the, 610
— interesting experiments with, 1080, 1087
— as a blasting powder, 1162
— enormous blasts with, 1171 [499
East Llangynog Mining Company, and the Companies Acts,
Ebbw Vale Steel, Iron, and Coal Company, 725
Echoes from the Mining Market, J. H. Crofts, 328, and following numbers
Elements of practical construction, S. Downing, 30
Emma Mine, the, 109, 329, 364, 411, 416, 440, 500, 517, 551; its position and prospects, 1222
English rails abroad, 170, 1024
— coals abroad, 278, 771, 918
— and Australian Copper Company, 1220
— railway iron abroad, 1394 [formulæ, 440
Engineering technology—hydraulic tables, co-efficients and European coal mining, 334
Exhibitions, the five great, 115
— of appliances for the economy of labour, 502
Explosives for blasting in mines, 1360, 1416
Experiences of a "Limited" company, 1338
Federation of capitalists, 530
Females, employment of on pit banks, 834
Fire at sea, efficacious extinguisher of, 10, 47
— Insurance Corporation, 253
— in the Donnington Wood Colliery, 1038
Florence Consols, 32
Flagstaff Silver Mining Company of Utah, 800
Forest of Dean Great Western Ironworks, 1192
Fossil forest at Wadsley, near Sheffield, 532
French railway economy, 559
Fuel, economy in, M. Charpentier, 1436
Gas in Paris, 414
— making, improvements in, F. W. Hartley, 1367
— in London, 935
— met with in coal mines, 1284
Gazeteer of Cornwall, R. Symons, 1107
General Expenditure Assurance Company, 815
Genius, misdirected, 279
Geology of the ores of iron, Prof. Smyth, 550
— of Croydon, the, 1380
Geological Survey of Victoria, 688; of India, 997
Geological discovery, interesting, 917
Geologists' Association—visit to Charnwood Forest, 579
Glan Clwyd-i (Lead) Mining Company, 799
Glass, toughened, 419
"Gold Run"—hydraulic mining, 157
— extracting of from auriferous pyrites, 334
— in Scotland, 432
— fields of Yesso—new mode of gold washing, 847, 912
— reefs in Australia, 1100 [192; Inspectors' reports, 658
Government inspection of coal and metalliferous mines, 172,
Gramme's Magneto-Electric Company, 83
Great Comstock Bonanza, 23
— Laxey—mining in the Isle of Man, 227, 1163
Gunpowder, the properties of, 24
— and naked lights, 1394
Half-year, the—its revolutions as to the metal trade, 799
Handbook for charcoal burners, 1380
Hematite ores of Cumberland, 107, 219
— regions, the, 383, 446, 580
Hendon Spelter Works on the Wear, 467, 581
Heroism, recognition of colliery, 1310 [nab, 515
Horizontal high-pressure winding-engines, Pollock and Mac-Howland and Etna Tunnel Company, 904
Husband's safety governor for Cornish pumping-engines, 1213
Hydraulic mining—Gold Run, 59 [292
Hydro-thermic motive power, and its application, F. Temurast,
Ifton Rhyn Collieries, Shropshire, 193
Indian coal field, on the, 163
— railways, and the English iron trade, 1114
Inspection in South Staffordshire, results of, 226 [1142
Insurance against mining and other accidents by workmen,
Industrial partnerships in mines, 195
Investments and speculations, 441
Institution of Engineers and Shipbuilders in Scotland, 1191
— of Civil Engineers, 1192 [and Kerry, 1482
Ireland—rough sketch of a trip across the South-West of Cork
Iron ore regions of the United States, 20, 225
— trade, crisis in the North of England, 114
— and coal trades—present and future, 142, 1142
— and steel making in America reviewed by an English ironmaster, 190; 226
— and coal kings of the North, 221
— and coal undertakings, 474
— and steel, our commerce in, 439, 528
— our exports of railway, 530
— making in West Virginia, 610
— trade prospects, 648
— trade, the British, and Indian railways, 855
— trade in Germany, 890, 913
— during the half year, 904
— and Steel Institute, 919, 966, 1304
— making experiments, important, 967
— the American demand for our, 1058
— iron trade news from the United States, important, 1115
— trade, our exports, 1142, 1283
— works of Creusot, the great, 1389
— and coal trades of Europe, 1422
— making in India, Government experiments in, 1436
Ironmasters upon the iron trade, 1338
Jacob's rod—dowsing and divination, 196, 219
Japan, coal mining in, 85
Joint-stock enterprise of 1874, 30
Kainotomon rock drill, 827
Kitchen boilers and hot baths, 742
Labour Laws Commission, 226, 666, 862
Lambert Mining Company, formation of, 277, 305
Lamps and lights, 390
Laurium, the mines of, 903
Lake Superior, successful mining at, 413
Lead mining, successful, 32
— deposits in the Island of Samos, 35
— and flooded lead mines, 62
— mines in the United Kingdom, 329
— mines of Brittany, 651
— mining in Lancashire, Prof. Boyd Dawkins, 466
— markets, an American view of the, 792
— mining in the North of England, 855, 884
— mining in Cardiganshire and Montgomeryshire, 969, 1291
Lectures at the Royal School of Mines, Prof. Ramsay, 56, 79, 106, 135, 162, 190; W. W. Smyth, 218, 247, 270, 298, 327, 354; Prof. Goodeve, 382, 410, 438, 466, 523; W. W. Smyth, 1247, 1274, 1302, 1330, 1358, 1386, 1414
Litters for the wounded at collieries and ironworks, 638
Limited liability companies, 1002
Llandillo Silver-Lead and Blende Company, 911
Local Government Directory, 109 [Institute, 255
Lord Chancellor's, the, Patent Law Bill, and the Investors'
Lyttle's metallurgical patents, 1023
Manx Silver-Lead Mining Company, 573, 798
Manchester Exhibition, visits to the, 714, 742, 808, 854, 882, 938, 966, 1106 [abilities of, T. Parton, 1106
Managers under the Mines Inspection Act, duties and respon-
Magneto electric bell signalling apparatus, 1360
Mechanical puddling—the Pernot furnace, 1030
Metal Market, the—annual review, 2; 580
— trade in 1875, 278
— Trust, the, 997
Metals, replacement of, 24
— our commerce in, 60
— the trade in, for the first quarter of the year, 583
— separating of from their ores, 495
— imports and exports, 612
Metalliferous Mines Act, 138, 499, 666 [Percy, 553
Metallurgy—the art of extracting metals from their ores, J.
Metallurgical works in America, 1436
Measuring air in mines, J. Dickinson, 1414
Memorial to George Stephenson, 1368
"Mechanic's Friend," W. S. A. Axon, 885
Minera Consols Mining Company, formation of, 220
Misdirected genius, 279
Minerals, formation of, 321
— resources of Victoria, 1053
— resources of Russia, 335
— resources of Canada, 652
— resources of New Zealand, 911
— resources of the South-West of Ireland, 431, 448, 467, 544, 551, 582, 603, 651, 666, 705, 717, 744, 771, 799, 845, 876, 900, 911, 958, 987, 1050, 1078, 1107, 1152, 1211
Minerals rolling stock, 946
— caoutchouc in South Australia, 1115
Mineralogy, determinative, 357
Mine ventilation, J. Topgue's lecture on, 668
— Drainage Commissioners, difficulties of the, 806, 1003
Mines Regulation Act, infringements of the, 1364
Miners' cottages, 83
— wages question, 307
— allowance coal, 390
— Conference at Swansea, 418
— and mineral rights, 446
— wages Conference at Leeds, 502, 806
— wages and miners' unions, 918
— safety-lamps and lights, 946
— and ironworkers' associations, 1198
Mining and smelting in Sarawak, T. Down, 79
— in the Isle of Man—Great Laxey, 227
— and commercial enterprise, 307
— and law reform, 418
— experiments, interesting, 467
— in the Peninsula, 502
— on the Pacific Coast, 551
— in Westphalia, 597
— immediate and prospective, 602
— practical—its hindrances and their remedies, 660
— laws of the United States, 689 [793
— enterprise in Utah—the Neptune and Kempton Mines,
— in Flintshire—the Mold Mines, 799 [1100
— on the Pacific Coast—great feat of mining engineers, 820,
— in the Eskdale district, 973
— in the South of Spain—Rio Tinto Company, 987
— progress in Cornwall, 1030, 1267
— and scientific education, 1142
— enterprise in Saxony, 1199
— in Nevada—the Consolidated Virginia, 1263
— affairs at the Antipodes, 1310
Mold Mines (Limited), 237, 799 [277
Mount Pleasant Silver-Lead Mining Company, formation of,
Monitor coal-cutter, the, 335, 348
Mouth blow-pipe, use of the, 745
Money, metals, and mining, 967
Motala Ironworks, Sweden, 997
Morvah Consols Tin Mining Company, 1267
Naked lights, and blasting with powder in collieries, 80
Nagel and Kemp's charging apparatus for centrifugal pumps,
Nascent copper process, 938 [653
New North Tamar Silver-Lead Mining Company, formation
— Zealand, the progress of, 142 [of, 141
— Cwmbol Slate and Slab Company, 202
— Prince of Wales Slate Company, 884
— British Iron Company, 1415
Neptune and Kempton Mines, 792
Newfoundland Mining Company, 334
Nickel Mines of New Caledonia, 1164, 1266, 1331
Nitroglycerine compounds, 610
North Staffordshire coal field, extension of the, 73
— of England iron trade, crisis in the, 114
— Anglesey (Point Ælianus) Slate and Slab Company, 603
Northern Bohemian Collieries Company, formation of, 945
Nodules in sandstone, 327
Northumberland coal trade arbitration, 306
Nova Scotia, mining in, 603
Notes on foreign mining law, 668, 715, 743, 912, 967
Norton Green Coal Company, Staffordshire, 771
Oil metallurgy, new system of, 947, 960
Old Tincroft Consols, Lelant, 651
Opening of the business season, 1135
Ore deposits of Cornwall, notes on the, H. Cookesley, 355, 382
Oregon Hydraulic Gold Mines, 904
Paint, use of as an engineering material, 495
Paisley Bridge district—Sunnyside and Merryfield Mines, 1060
Patent laws, amendment of the, 198
— question in 1875, 271
— atmospheric tramway engine, 386
— fuel, 1295
— Gunpowder Company, 630, 694
Patents for Invention Bill, 496
Peat fuel—its manufacture and application, 843
Peninsula, mining in the, 502
Peninsular and Oriental Steam Navigation Company, 1366
Pennsylvanian coal and iron industry, 1254
Percy and Kelly Nickel, Cobalt, and Chrome Iron Mining Company, formation of, 1253
Pernot furnace, the, 1030
Phosphor bronze bearings, 135; and its uses, 289
Pistons, steam-tight, for steam and other engines, 625, 681
Plattner's blow-pipe analysis, 532
Plumbago mining in England, revival of, 1163
Plummet lamp for surveying in mines, Mr. Heller, 598
Pneumatic process of dressing minerals, 1332 [in, 79
Poisonous vapours, appliances for enabling persons to breathe
Popular geology, 1277
Practical mining education—English and foreign miners, 390
Prussian Mining and Ironworks Company, 87
Prudential Assurance Company, annual report, 272
Precious metals contained in copper pyrites, extraction of the,
Profits of gold and silver mines, 1024 [F. Claudet, 693, 715
Projectiles and rifling, with practical suggestions for their im-
Puddlers, rotary, varied results of, 834 [provement, 716
Pumping machinery at the Vienna Exhibition, 30
— engine, the best form of, 1198
Pyrology, or fire chemistry, 773
Quantitative and qualitative analysis of nickel, cobalt, and silver ores by the use of the blow-pipe, Hugo Cookesley, 191
Quartz mill, a novel, 1087
Queensland tin field, the, 597
Quicksilver, and quicksilver smelting, 432
— decline in the value of, 875
— trade, the, 1058
— reduction in California, 1156
— recovery in the value of, 1201
Railway iron—American railroads, 86, 306; prospects, our, 418
— signal, a new, R. A. Macfie, 271
— a new narrow-gauge, 631
— speed indicator, 631
— iron abroad, our, 666
— iron at the Antipodes, 694
— travellers, safety for, 917
— prospects, 995
— jubilee at Darlington, 1107, 1135, 1191
— interest, the home, 1198
— enterprise in America, 1200
Rating public companies property, 778
— ironworks and collieries in Wales, 1198
Ravenglass and Eskdale Railway, 253
Registration of New Companies, 2, and following numbers
Rhymney Iron Company, 941
Richmond Consolidated Mining Company, 56
Rock drills, novel principle in, Tangye Brothers and Rake, 184; the "Levet," 653; the "Champion," 882
Rocks of the mining districts of Cornwall, and their relation to metalliferous deposits, J. A. Phillips, 298
— boring machinery, and Brain's blasting powder, 1086
Rotary boiler—economic generation of steam, Dr. F. Grimaldi,
Rockingham Colliery, Yorkshire, the, 659 [1366
Royal Cornwall Polytechnic Society, 586, 1022
— Rhenish Westphalian Polytechnic School, 903
Russia, the mineral resources of, 335
Safety-link, Ormerod's new patent, 433
Sarawak, mining and smelting in, T. Down, 79
Scottish Australian Mining Company, 1332, 1351
Scotch iron trade of 1874, 3
Scientific industry, promotion of, 550
Shareholders, the rights of, 265
"Shooting fast," or nicking? 1114
Shafts, new method of sinking through loose or watery formations, 659, 1282, 1295
Signal apparatus for collieries, W. Leach, 848 [885
Simplon Railway Tunnel, and the interests of Western Europe,
Silicate cotton, F. Krupp, 1424
Sicker Safe and Strong Room Company, 501
Sierra Buttes Company,—gold quartz mining, 240, 932
Silver mining in Canada, 20
— mining in Utah, 904
— mining in Colorado, 165
— mines, the wealth of, 128
— mines in India, 1283
— mines of Santa Eulalia, Mexico, 1184
— regions of the world—value of the mines, and how they are worked, 1325
Silkstone Fall Colliery Company, 418, 1310
Skew Arches—Practical Engineering, E. W. Hyde, 716
Slickenslides, on the origin of, 270
Slate trade, the, 1170
Society of Engineers, 833
South Australia, progress of, 362
Sovereign Life Assurance Company, 517
Spectrum analysis, new application of, 502 [156
"Special" direct-acting steam pumping-engines, a pair of the,
Spelter, 163
Spon Lane Colliery Company, formation of, 253
Steel casting at Sheffield, 107
— cheap, 530
— and iron, 908
Stoppage in the North, the great, 1226
Stone-breaking machinery, Marsden's improved, 1101
Stream tin deposits in Victoria, 1223, 1266
Strousbergiana Company, formation of, 1072
Sturgeon's high-speed air-compressing machine, 516
St. Patrick Lead Mine Company, formation of, 144
St. John del Rey Mining Company, 680
Staffordshire, and its mining engineers, 114
— ironworks managers, and the Belgian iron trade, 750
St. Gothard Tunnel, the, 959, 1050
Star Life Assurance Society, 376
Steep gradients on railways, 1163
Steam pumps—drainage of deep mines, 792
— Sentinel, the, 1157
Sub-Wealden Exploration, 10, 107, 580, 694, 941
Subterranean world, the, 778
Successful lead mining, 32
Sulphuret ores—the Sonora process of treating, 544
Sulphur in coal, 610
— mining in Italy, 1086
— from iron, the elimination of, 1416
Surrender Mine, Reeth High Moor, 1380
Sunnyside Mining Company, 1419, 1437
Tables for copper miners, 6
Tank buddle and the ammonia process, 495
Taper steel rods, 1325
Tasmanian tin, 1378
Technical education in Canada, 1156
Telegraphy, rapid, 1031
Testimonial to Capt. W. Thomas, 33, 791
Thermo-electric generator, 1267
Thrapston Iron Ore Company, 87
Tides and waves—the deflection theory, A. Taylor, 221
Tin scraps, treatment of, 129
— plate manufacture in Pittsburg, 569
— and terne plates, American, 1053
— trade, its position and prospects, 1310
Traction engines on common roads, 164
Trades Unions, proposed federation of, 38
Transvaal gold fields, the, 335
Treleach Silver Mine, Carmarthenshire, 661
Tretoil and Cariggan Mines, 411
Tyllwyd Silver-Lead Mine, 613 [85
Union Railway Carriage and Wagon Company, formation of,
United States, coal in the, 198
— tin trade, 199
— Assurance Society, 1284
Ure's Dictionary of Arts, Manufactures, and Mines, 582
Valleys, and their relation to fissures, fractures, and faults,
Valve gears, designing of, 981 [G. H. Kinahan, 184
Ventilation, mechanical, of mines, 1267
Victoria, the industrial progress of, H. H. Hayter, 240
Visit, a, to some North Devon and Exford Mines, H. Cookesley,
Wages question in South Wales, 444 [631
— of ironworkers and miners, 586
— and profits in the iron and steel trades, 778
Walker's detaching hooks, 1157
Water and liquid indicator, Nicholas's patent, 1144
Welsh gold mines, 306
— slate trade, the, 688
West Prussian Mining Company, formation of, 529
Wheal Mary Ann sale, 254
— Peevor Mining Company, 1052
White brass bearings, 681
Winding engines, direct acting, for mines, 1267
Working steep gradients by locomotives, novel system of, 1163
Yorkshire Exhibition of Arts and Manufactures, 534
Zinc and lead mining in France, 664
— the erection of works, and the metallurgy of, 1268

PATENTS.

Alum, manufacture of, W. Beatson, 110
Amalgamator, improved dry, E. J. Fraser, 764
Ammonia, obtaining of from waste products, J. Lair, 289
Boilers, F. H. Lloyd, 101; Marriott and Graham, 405
— furnaces, E. Milner, 820
Brickmaking machinery, C. W. Thairlwall, 544
Buffers, compensating, Pullman and Sterne, 1183
Cartridges, blasting, R. S. Lloyd, 83
Calcining kilns, Siemens and Stein, 441
Caloric engine, improved, N. P. Watt-Boulton, 799
Cement, G. H. Forbes, 469; T. Holden, 605
Charcoal furnaces, E. Langen, 58; 156
Chilled rolls, manufacture of, Robins, Wood, and Allbut, 439
Compressed air, C. D. Abel, 1172
Communicating under water, R. Applegarth, 5
Counter, a new, A. Walker, 23
Concreate, durable, J. O'Friel, 189
— pipes, and drilling rocks, 375
Coal cutting machine, P. Higgs, 413; J. Alexander, 999
— shale, J. Beil, 605
— washing machinery, M. Everard, 1144
Colliery plant, R. A. Wilder, 1414
Coke, manufacture of, Messrs. Penrose and Richards, 335, 405
Compressed air locomotives, M. Ribourt, 1073
Copper, purifying of, S. L. Croker, 1072
Danger signals, audible, J. Boulton, 917
Drain pipes, D. Oppenheimer, 597
Dry ore concentrator, J. Vincent, 709
Drills, removing broken from holes, J. W. Platt, 903
Drilling in metal, Weare and Isherwood, 921 [1111
Electro magnetic signalling apparatus, W. N. Haggard, 1100,
— magnetic engine, C. A. Hussey, 1213
Electric light, production of, S. A. Kosloff, 939
— apparatus, B. Tanner, 921; Messrs. Paine, 1418
Engine Valves, J. N. Coxon, 30
Engines, reciprocating, E. Edwards, 439
Excavating Machinery, E. W. Stoney, 1101, 1397
Exhauster for mine ventilation, Mr. Körting, 1139
Fires, detecting, J. Leithwaite, 5 [wood, 921
Filter, improved, J. and A. Outerson, 321; Weare and Isher-
File-cutting machine, C. Vogel, 653
Furnaces, rotary puddling machine, Lester and Fallows, 2
— regenerator, M. Foster, 179
— wooden linings for, C. W. Siemens, 799
— roasting and puddling, C. J. Schofield, 959 [1144
— improvements in metallurgical and boiler, A. Parkes,
Fuel, economising, Black and Leiper, 9; R. J. Ellis, 904
— liquid, J. H. Thorp, 24
— artificial, D. Barker, 126; R. K. Atchison, 128; H. T. Clubley, 172; R. Hodson, 192
— new, Col. Byron, 321
— supplying of to furnaces, T. Henderson, 348
Gas engines, G. B. Brayton, 30; G. W. Daimler, 121
— manufacture of, S. Holman, 541; G. Walker, 827
— atmospheric, J. Mather, 959
— regulating the flow of, V. Barton, 1144
— purification of, G. T. Livesey, 1387
Gunpowder, G. Hayeroft, 621
Guncotton compounds, F. Greening, 1418
Inscription plates, producing, R. Mallet, 877
Iron-plates, pickling and coating, T. W. Flower, 329
— and steel, manufacture of, W. A. Lyttle, 377; H. Aitken, 401; A. Barclay, 413; W. Brown, 545
— smelting of, W. A. Lyttle, 544
— ore, artificial, Mr. Johnson, 1418
Lamps, improved, F. Rhind, 653
Lead, desilvering, J. A. Cicognani, 20 [1417
Lubricator, an improved, Rumsey and Davies, 9; J. Wilkins,
Lubricating compound, a new, B. French, 61
Machine cutters, J. Lynam, 1212
Magnetro-electric machines, Fuller and Chandall, 1417
Marble, artificial, T. Deane, 301
Mercury, reduction of, R. Berrens, 1072
Metals, casting of, Messrs. J. B. Farr, 2; C. H. Holt, 314; J. Stone, 522; rolling of, S. Whitham, 126; deposition of, Unwin, Brook, and Draper, 128; improvements in treating, W. H. Smith, 271; J. F. King, 469; G. J. Snelus, 544, 581; Farnsworth and Sansom, 881; W. H. Smith, 1001
Metallic tubes, R. W. Winfield and Co., 5; A. Clifford, 605
Metallurgical furnaces, A. Parkes, 1034
Mine cages, E. T. Hughes, 110
Mining lamp, improved, W. E. Teale, 300
— and quarrying machinery, G. Stevenson, 933
Motive power, self-operating and self-sustaining, 326
— from waves, Deverell and Tower, 921
— and marine propulsion, E. H. C. Monkton, 1213
North Hendre, 1349 [110
Ore separator, improved, C. H. Campfield, J. M. Hornbeck,
Ores, crushing, &c., H. R. Marsden, 23; J. Ireland, 78
— roasting of, E. Hellegendorfer, 387
— treatment of, Sir D. G. Fitzgerald, 995
Oxide of iron, spent, W. G. Valentin, 581
Patent iron on metal wheels, W. Arnold, 1073
Peat, novel application of, A. Wilkinson, 799
— H. Conradi, 1153; C. E. Hall, 1267
Perpetual motion, J. Lüdeke, 289; J. O'C. Cave, 687
Picks, M. Dodds, 157; C. Hardy, 328
Pipe-clay, J. Liston, 213
Plates, slabs, or tiles, new manufacture of, Mr. George, 544
Pneumatic railways, R. R. Gregg, 932 [G. H. Sellers, 688
Puddling, Sir J. G. N. Alleyne, 156; W. Evans, 300; W. and
— furnaces, revolving, T. R. Crampton, 1024
Pumping engines, W. Walker, 108
— and blowing machinery, T. Mackenzie, 138
— an improved, C. H. Hudson, 679
— the differential expansive, H. Davey, 849
Pumps, direct acting, Parker and Watson, 517
— improvements in, Evans and Sons, 597
Railway carriages, warming of, W. Tice, 736
— travellers, safety for, Garnham and Co., 917
— brakes, W. H. Stokes, 921
— signal apparatus, automatic, W. N. Haggard, 1325
Rescuing colliers after explosions, H. Favol, 1085
Riddling and loading coal, G. Parker, 1073
Rock-drills, Mr. Haseltine, 339; W. Walker, 405, 1325; G. Atkinson, 681; Major Beaumont, 765; W. Ellis, 1080, 1101; J. K. Gulland, 1173
Rotary puddling furnace, Messrs. Jones, 631
— engines, W. Ligerwood, 1128
— engines and pumps, J. Simmons, 1418

Safety-lamps, Edwards and Co., 313; L. M. Landau, 271; Salt, T. Barrow, 276 [A. B. Boullenot, 806, 941
Signalling instrument, Lieut. Parrot, 921
Silver, substitute for, A. Parkes, 30
Slate cutting machine, T. W. Parry, 774
Smelting, Haseltine, Lake, and Co., 107; R. Stone, 413
Steam condensers, E. O. Brinkerhoff, 5
— boilers, R. Readhead, 23; A. de Pindray, 376; R. and J. Smith, 682; J. C. Graham, 1001; Galloway and Holt, 1024
— generation of, G. H. Lloyd, 24; Mr. Boulton, 999
— generator, Allibon, Maubre, and Beldam, 885
— pump, double-acting, with one ram, F. Pearn and Co., 78
— engines, J. Shuttleworth, 135; J. Higham, 213; J. Bernays, 270; H. Hughes, 554; Mr. Miner, 1268; R. Duncan, 1304; M. Roser, 1415
— boiler furnaces, T. Cass, 273; I. Fielden, 771
— gauges, recording, M. B. Edson, 1173
— governors, Mr. Chase, 844
Stoker, mechanical, J. Smith, 5
Stoking apparatus, mechanical, J. Smith, 959
Stone, artificial, J. M. Robertson, 24
— breaker, Bradley and Madderson, 843
— cutting machinery, J. Jordan, 1405
Sulphate of soda—sulphate of potash, McDougall Brothers, 376
Superheating apparatus, W. E. Gedge, 128 [292
Sulphuracids, and their analogues, manufacture of, A. Payne,
Tiles and quarries, J. B. Inskeep, 459
Tin-plates, R. Taylor, 111; T. W. Flower, 289; T. Terrel, 959
— scraps, utilising, 765; Matthews and Leather, 1191
— utilising waste, F. G. Morton, 1249
Traction engines, W. H. Milliken, 1249
Tramway locomotives, L. J. Todd, 882
— and road-car traction, A. S. Hallidie, 1144
Tunnelling machines, improved, O. B. Down, 1213
Valve-gear for steam-engines, R. McGlasson, 292
Vanning machine, W. B. Prue, 459
Valves, improvements in, W. Mann, 1135
Ventilation, D. M. Morrison, 376
Ventilating underground railways, A. Chambers, 544
— mines, Knott and Budd, 1212
Vulcanite, treatment of, W. C. Henderson, 1421
Waste products, utilising of, W. A. Lyttle, 126
Water, purification of, Prof. Bischof, 35
Waterproof compounds, Mr. Newton, 1424
Welding tubes, H. K. Flagler, 995
Wooden lining for furnaces, C. W. Siemens, 799
OBITUARY.—Isham Baggs, 109; Sir Charles Lyell, 218; Sir Goldsworthy Gurney, 270; T. E. Forster, 279; G. Bailey Toms, 332; J. Downie, 439; Capt. W. Jacob, 439; Capt. J. Lean, 569; H. Howell, 604; J. M. A. Gordon, A. Harper, W. J. Henwood, 857; Mr. Von Uster, 1105; T. Faull, 1167; Capt. J. Cornish, 1419

FOREIGN MINES.

DON PEDRO NORTH DEL REY.—Report for Nov.: Produce and Cost: Produce, 507 ozs. troy, at 8s. 6d. per oit., 1869*l.* 11s. 6d.—Cost, 2336*l.* 18s. 1d., surface explorations, 153*l.* 16s. 1d.—2490*l.* 14s. 2d.: loss, 621*l.* 2s. 8d. First division of Dec. —Produce, weighed, 1467 oits.; remittance, one month, 4592 oits. Telegram from Rio, Jan. 8, referring to a later date than the above report, advised 4300 oits. for the month of Dec. Deficiency of surface water continues.

JAVALI.—Capt. Sohns (Dec. 6): Our mill worked 25 days, crushing 1500 tons of quartz, yielding 357 ozs. of gold, at an average of 4 dwts. 18 grs. In the last three or four days the daily result obtained was far better, and this gives me hopes that the quartz has already improved. The expenditure was 767*l.*; the remittance is valued at 980*l.*: thus leaving a profit of 213*l.*

TECOMA (Sliver).—Telegram from the company's manager in America: Gamble reports body ore increasing, estimates can extract 10 to 20 tons daily. Cullins has examined, opinion promises large mine.—BARKER.

RICHMOND CONSOLIDATED.—Cablegram from the mine at Eureka, Nevada: Week's run, $30,000. Winze sunk 80 feet in ore.—RICKARD.

CHONTALES.—W. Smeddle, Dec. 5: During the past month we have reduced 1749 tons of ore, from which we have obtained 203 ozs. of gold, being an average of 2½ dwts. per ton. Our expenditure has been 603*l.* 4s., we value the gold obtained at 546*l.*, leaving a loss of 57*l.* 4s. Owing to an accident to the machinery no benefit could be derived from re-grinding the blanket sand, hence the low produce. No alteration of importance in any of the mining operations. Mr. Danby, the new manager, writes from Greytown of his safe arrival at that place on Dec. 14, and was about to leave for the mines.

SANTA BARBARA (Gold).—The directors have received the usual monthly advices from Mr. Hilcke, dated Pari, Dec. 14, giving the results of the working of the mine. During November, 1116 tons of mineral were stamped, yielding 3200 oits. per ton, or a total of 3572 oits. of gold, which, valued at 8s. 6d. per oit., amounts to 1518*l.* 2s, as the estimated value of the produce for the month. The mine working cost for the same period was, at exchange, 27¾d., 1053*l.* 0d. 1d., thus leaving an estimated profit of 465*l.* 1s. 11d. for November. The capital expenditure during the month amounted to 45*l.* 11s. 9d. for new blacks' houses.—Mine: Summary of mine captain's report for November:—"The lode in general has maintained its favourable size and appearance, but the yield has been lower than in October; these fluctuations in the produce of the lode are not uncommon, and, as far as my experience of the mine goes, I find generally that when the lode is making wider, as was the case in October, or is on the point of decreasing in size, it is then more productive than at other times. This, as far as I can see, accounts for the low yield during the present month, in which we have had no such changes. But little has been done in sinking: we have cleaned up No. 1 shaft, and found the bottom of same very small, and had, therefore, first to increase its length. The lode here is full 12 ft. wide, and has a kindly appearance. Mr. Hilcke states that as the shaft will probably not be sunk more than 4 or 5 ft. each month, some time will be required to open out more stoping ground than is at present available, until when, it is not to be anticipated that the mine will yield much better results than now attained unless some increase on the general yield of the lode during the past few months should take place. He has good hopes, however, that the December produce will show an increase in the yield of the mineral as compared with November.—Surface: More progress has been made in erection of the "senzals," or blacks' houses, than in the previous month.

SIERRA BUTTES (Gold).—Result of the working at the Sierra Buttes and Plumas Eureka Mines for December:—Sierra Buttes Mine: Receipts, $31,456; total California expenses, including cost of mining and milling, $22,425.—Plumas Eureka Mine: Receipts, $34,564; total California expenses, including cost of mining and milling, $20,302; tons of sulphurets saved, 88; tons of sulphurets amalgamated, 45; yield of sulphurets per ton, $73. The shareholders decided some time ago that dividends on Sierra Buttes (ordinary shares) should be declared only on the presentation of audited accounts, and the directors propose to adopt this decision with reference to dividends on Plumas Eureka shares. At the next general meeting, to be held early in April, audited accounts to Dec. 31, 1875, will be presented, on which the directors will recommend the declaration of dividends on both class of shares.

GOLD RUN.—J. A. Stone, Dec. 31: I last wrote you on the 26th inst., at which time the ditch which supplies our water was broken, but it was soon repaired, and I am washing both night and day, making better progress than I anticipated. I commenced night washing yesterday. I ordered a new machine yesterday similar to that used by the Miners' Ditch Company. I think it will very soon save more than its cost by my being able to cut more gravel, and work down faster, with the same amount of water. One pipe with a 4½-inch diameter nozzle takes about 400 inches of water to fill it.

EBERHARDT AND AURORA.—Capt. Drake, Dec. 29: I can report nothing specially new of the mine. The strike of Nov. 30, that I soon after mentioned, I regret to say has not as yet opened out into so large a body of ore as it promised, for it covered well the face of the drift. I would have delayed my report of it till further proved had not the "news" been spread by the miners, and such an excitement been created in the public generally. As it was, I could only report as the thing then appeared. But though our hope is delayed I consider the development certainly valuable, as an indication that we are in the immediate vicinity of other and larger bodies of ore, and I am driving to verify it.

SOUTH AURORA CONSOLIDATED.—The Anguilla Phosphate Company (Limited), West Indies, have received advices from their superintendent, Capt. Bickford, under date Dec. 24, 1875, of which the following is an extract:—In view of my first cargo soon going forward I send you by this mail a small box of samples from each pile now on the ground for analysis, and will, I trust, meet with your approbation.—Mining Report: Anguilla; At Flat Caps work has been carried on steadily during the month.—Quarry No. 2: Fair work has been done by this gang in cutting down sides preparatory to commencing the bottom at sea level, in doing which a few tons of fine quality stuff has been turned out. The submarine works will be started early next month.—Quarry No. 3: This gang has been engaged in taking out from caves in connection with this quarry a good parcel (about 40 tons) of bird manure or guano (fine) that ought to fetch a high price. This will be put on board separate from the phosphate proper, and we are now stoping the bottom for the hard compact phosphate. The yield and quality are good.—Quarry No. 4: There is no change to notice here, the position and quality being identical with my last report.—Quarry No. 5: A slight falling-off in quantity is visible here, but I trust is only temporary. This, as well as the other quarries, may be expected to improve as they approach sea level.

The prospecting gang still proceed with their work; and, although nothing of consequence has been found, yet they are taking out fair quality stuff.—Cartouch Bay: The men have been engaged clearing out a large pile of debris left in the bottom by the former workers, in doing which a quantity of phosphate, sufficient to pay for the work, has been found in it. In the bottom we have also found several bunches of mineral, but as yet I cannot speak as to their probable duration. Total of people employed, 93 souls.—St. Martin's: Simpson's Bay: I am pleased to inform you that the steam-crane has been put up, although I am not in a position to try the submarine deposits yet; but as soon as my assistant arrives I shall immediately move this work.—Devil's Hole: A pile of very good quality stuff is being got out from here, and I am glad to say this quarry promises fair. At present my impression is that it will make a submarine work, and I trust it may be so. Adjoining it are two others that I am now trying, and should the first prove submarine I should cut down the divisions and make one section of the whole.

No. 1 Quarry: I have a gang at work, but nothing worthy of note to report this mail. Total staff employed 43 men and boys, exclusive of a few carriers that I have had for a few days getting the phosphate to the shipping place. The Anguilla samples from quarries Nos. 23, 24, 25 are about as fair as I can get them under the circumstances, but I think are below the average of the piles, as I was cautious not to get them too good, and I think they will please you. The Cartouch Bay sample is also a fair one; the flat white piece unenclosed but labeled comes from amongst the bird manure from No. 3, and is simply sent as a curious formation; a good deal of it is in the piles from that quarry. The Simpson's Bay sample is from the whole mass, and is, I think, up to the quality of the pile.

SAN PEDRO.—R. M. Kitto, Dec. 1: New Shaft: The 150 cross-cut driving south of west of this shaft by six men, ground still hard, every branch that is met with in this end is showing good spots of yellow bronces; all the water is coming out of the bottom of the end, which I consider a very good indication. A winze sinking below the 135 by two men is producing good stones of ore; this winze is sunk 24·50 metres below the level. A stope in the back of the 135, south part of manto, has greatly improved since my last report, and will now produce 6 tons of 25 per cent. ore per fathom; it is now 18 ft. wide, a splendid lode of ore, and is worth 18 tons per fathom for the whole width. A chiflon sinking below this stope is the bottom of the 135 will produce 1 ton of 25 per cent. ore per fathom; we expect an improvement here shortly. The tribute pitches are without alterations since my last, as the men are dressing up their ores. A cross-cut driving south of west from new shaft at the 88 is producing good stones of copper ore, the ground being very favourable for the production of copper.—Cuba Mine: A cross-cut driving by two men—the ground has become a little harder: we have passed through a good manto of ore here, and shall open out on it when we communicate a chiflon from surface. A chiflon sinking from surface by three men is producing good stones of coloured ore.—Santa Helena Mine: A tribute pitch in the bottom of the adit level by three men will produce 2 tons of 25 per cent. ore per fathom. I am glad to state the engine is working well, and all the works connected with the mines, both at surface and underground, are progressing very satisfactorily.

EXCHEQUER (Gold and silver).—Mr. Lewis Chalmers, Dec. 27: Receive herewith account for October, November in a few days. I have the honour to report for the information of the board that, in consequence of so much rain the road to the mine has got so bad it will not pay to keep the hired teams running longer. I have, therefore, paid them off. Our own team keeps hauling ore to the mill, and lumber to the mine daily. The accompanying tracing will show you what is doing here. The building to cover the conveyors and elevators between battery and furnace and back to pans is completed, except the windows, and the long conveyor boxes made and placed, but the conveyor machinery has not arrived. The mortars for the old and also for the new 10 stamps battery, shown in the tracing, weighing together 13,720 lbs. have arrived, and those for the old battery will go in at once. I shall not build the new battery till spring. At the mine the station at the 300 is all but completed, and the cross drift to lode run 6 ft. Stoping at the 140 winze is being prosecuted steadily, and supplies all I can haul in the present state of the road—only 4 tons to the load, and one load a-day. I sent eight lodes to the mill last week—32 tons. This hauling business requires consideration. By-and-bye I shall submit to you my views in detail. Crudely formed they are these: erect 10 stamps at the mine, crush wet and send the crushed stuff to the mill to be roasted and treated, as it is treated there all but the stamping, which will have been already done; have large reservoirs at the mill to hold the stuff that comes from the sluice boxes. This will be done for little more than the cost of one year's hauling, and thereafter the expense of transportation will be nil if I except what repairs the sluice boxes may require. The boiler-house is at last completed, except the shingling. After the frame was well up, but before it could be braced, the banks came in all round and squashed it; I have never seen so much rain here. The 200-ft. men are building the boiler house. All goes well.

LUSITANIAN.—Jan. 11: Paihal: At Taylor's engine-shaft, below the 180, the lode is 8 ft. wide, composed of quartz. River shaft is holed to the rise above the 160. In the cross cut at the 110, south of Basto's lode and east of River shaft, the ground is still hard, and we have seen no branch or lode.—Levels on Basto's Lode: West of Taylor's shaft, at the 180, the lode is 1 ft. wide, composed of flookan and quartz, and in the 170 the lode is 1½ ft. wide, yielding 1 ton of copper and cobalt ore per fathom. In the 150, east of River shaft, the lode is 4 ft. wide, composed of quartz and country. In the 150, west of Taylor's and west of the slide lode, the lode is very small and unproductive. At the 90, east of River shaft, the men are still engaged in clearing the stuff in the level. The 70 is being continued east of this shaft in a lode 1 ft. wide, but without mineral to value, and the 28, on lode 4 ft. wide, composed of quartz and spots of lead. At the 50, west of Taylor's and west of the slide lode, the lode is very small, but there is a small stream of water coming out of it which has not been seen before. The mill lode in the 70, east of river shaft, is 1 ft. wide, composed of soft country and spots of mundic. The caunter lode in the 150, west of Taylor's, is 1½ ft. wide, composed of quartz and stones of ore on the north wall of the lode. At Carvalhal, the branch in the 60, west of the cross-cut, is from 4 in. to 8 in. wide, composed of quartz and spots of mundic.

BENSBERG.—C. Craze, Jan. 17: Victoria shaft has been sunk 2 ft. last week; the ground here has become a little harder, a hard branch having come in from south side; this branch contains a little lead, and is likely to fall in with the lode in depth, and in doing so, I think, cannot fail to improve the same. The lode in the 14, west of this shaft, is gradually becoming larger, now 4 ft. wide, and produces fully 1¼ ton of ore per fathom, with a good appearance for further improvement. The lode in the 14, east of this shaft, has also improved, now worth ½ ton of ore per fathom, and from its appearance in the bottom of this level I expect a bunch of ore in our next level under this point.

[For remainder of Foreign Mines, see to-day's Journal.]

CHICAGO MINING COMPANY.—At the Auction Mart, on Wednesday, Messrs. Rushworth, Abbott, and Rushworth, of Change-alley, sold 168 shares, of 10*l.* each (paid up) in the Chicago Silver Mining Company, for 870*l.*

ECLIPSE GOLD MINING AND QUARTZ CRUSHING COMPANY.—Wednesday last we, through the courtesy of Judge Conklin, took a ride down to the Eclipse Mill, which, it may be of interest to some to know, is ten miles south of this place, on the east bank of Owens River. Since the Messrs. Eudey, of the Eclipse, have at their own expense built a good bridge across the mill, it is much easier of access than formerly via the Bend City bridge and sandy road down the other side. A great deal of interest is felt in the result of the present operations of the Eclipse Company as carried on by the efficient and thoroughly energetic gentlemen, Henry and Capt. Jos. Eudey, who, at their own personal risk, some time ago took it in hand, determined to show to the world that the Eclipse Mine can be made to pay, notwithstanding previous failures and the unavailing expenditure of such vast sums of English sovereigns. The history of this mine since its location early in the decade beginning in 1861 forms a lengthy and most interesting chapter in the story of Inyo County mining operations; but we shall now forego all that, except to say that during all these years it has always been looked upon as the representative mine of its class. If it proved a success, in the ordinary acceptance of that term, it practically proved the success of scores, not to say hundreds, of other gold-bearing ledges cropping boldly out everywhere in the vicinity and along the whole length of the Inyo range in which it is located. If the Eclipse Mine could be profitably worked, so could and would scores of others; and thus its fortunes have excited an interest far beyond its own individual merits and financial importance. After conceding an unlimited supply of ore there remained but two things to determine—first, how to save a fair percentage of the exceedingly fine gold the ores contain; and, secondly, to reduce the cost of manipulation to a minimum, so as to leave a clear margin, however small, for profit. As the history of previous operations show, these were matters of grave import. To mine, transport three miles, and mill obstinate ores profitably, which, as a whole, do not not exceed $15 per ton assay value, was a most serious undertaking in a country like this, where, owing to lack of railroad and other facilities, $100 ore in fair quantities has generally been considered the minimum value per ton, admitting profitable reduction and mill process, after making due allowance for the inevitable waste attending the reduction of such ores, all more or less base. The present operations of the Messrs. Eudey will soon definitely solve these two problems. Their work has been to arrange machinery and appliances of all sorts, so as to reduce the cost of handling the ores from first to last to the lowest possible figure. Considering the limited means at their disposal, we do not see where anything more could be done in this direction than they have already accomplished; but it has required months of hard labour with their own hands, and most economical and persevering efforts. In this way they have fully demonstrated this fact, that the ores can be mined transported three miles, crushed and amalgamated, and expenses all told, for a sum not exceeding $7 50 cents per ton—our own estimate, which we believe is fully 25 per cent. larger. This fact established, there remains but the matter of saving such a percentage out of such low grade ores to show a profit. As we assume the average value of the gold quartz to be not higher than $15 per ton, it will be seen the margin for profit is quite limited, but from all we have seen we feel perfectly confident that problem is almost, if not quite, as satisfactorily demonstrated as the other, and yet, so far as our limited observation goes, by no unusual or extraordinary means as regards machinery or process. We do not feel safe in offering a scientific statement of the component parts of the ores, particularly as we did not make that a special object of enquiry, or visit the mine itself; it is enough now to say that, mixed with the gold quartz, considerable quantities of valuable argentiferous galena is found, all of which, however, is, in the first place, carefully selected from the gold quartz and thrown aside, as the lead, of course, renders perfect amalgamation in the pans an impossibility. The next point to be attained is to effect a thorough scouring of the infinitesimal particles of iron-coated gold, which has to be done in the pans, as usual. When that scouring is well done, the whole difficulty of amalgamation is supposed to be effectually surmounted. Enough has already been done in the Eclipse mill, under its present management, to prove beyond doubt that all that is necessary for the purpose, when the ores have been properly assorted, is the simple pan and settler process, without roasting or chemicals other than a partial use of the mixture embraced in the name "alkali," to be had everywhere around for the mere collection. As yet no grand clean-up has been made; therefore, we cannot say that the other problem is solved entirely beyond question, but yet enough has been done to quiet all fears on that important point—that is, to prove that these low-grade ores are acturlly being worked with a greater or lesser margin of clear profit, the exact degree yet to be determined after a general clean-up, to take place, perhaps, not for two or three weeks yet. At present, lack of pans and settlers admits the employment of but 20 stamps a portion of each day—say, 10 hours; the other machinery running constantly. The average amount of ore put through in that time is about 16 tons. Additional pans and settlers are to be put up as fast as circumstances will possibly admit until the 30 stamps now in place can be kept fully employed. The mill has been rebuilt in good part, the machinery all operating as true and smoothly as in the most pretentious mills on the Comstock. An 18-ft. overshot water-wheel has been added to the large turbine, which alone looks capable of giving all required power, but the duty of the overshot is confined exclusively to the operation of the settlers, so as to permit of independent action in case of accidents or other causes requiring the stopping of the powerful turbine. The water power is ample and available at all seasons, and its cheapness, compared with steam, is a most valuable factor towards desired results. At present the pulp in the pans is worked cold, but they are to be heated with steam as soon as the boiler can be constructed from the procured plates now on the ground, and put in place. We shall defer some matters of detail concerning tramway, mine, mill, machinery, force employed, &c., until after a future visit we hope soon to make. In conclusion for the present, we deem it proper to say that the Messrs. Eudey have worked unassumingly along from the first, not inviting, perhaps not desiring, any newspaper prominence for the property in their charge or their individual efforts, content to let only actual results demonstrate value and judgment. We feel it quite in place to acknowledge their courtesies, and not less those from Mr. Willett, a prominent member of the company, now on a visit to the property, but who proposes soon to return to England.—*Inyo Independent* (California), Dec. 25.

EXCHEQUER.—Work at the mine and mill is vigorously prosecuted, good ore is being taken out, and three teams are engaged in hauling it to the mill. The saw-mill is steadily at work getting out timber and lumber for the mine and quartz-mill. The new boiler at the mine is in position, its house completed, and it will be set and ready for use within a few days. The mill has been changed from wet to dry crushing, and its appliances improved; additional buildings are being erected, and the battery section is to be extended for the reception of an additional battery of ten stamps, now at Carson awaiting shipment, and another large stable is to be built. In about three weeks crushing will commence. The weather this week has been clear, very warm, and pleasant.—*Alpine Chronicle*, Dec. 18.

EXCHEQUER (Gold and Silver).—New Mill: Next spring the Exchequer Company contemplates the erection of a mill at the mine. This mill will be devoted exclusively to crushing ore. The crushings will be sluiced down to the present mill for manipulation. By having a mill at the mine the hauling of ore is dispensed with, and low grades can be worked. The great saving thus effected must be obvious to all when we state that the mine is 1½ mile air-line and 5 miles by road distance from, and at an altitude of 2200 ft. above the mill. Teams, of course, will be required to haul timbers and lumber from the company's saw-mill to the mine, but a less number will be needed, the consequent delay of loading and delivering being obviated more trips can be made: this is a judicious movement in the right direction. Good ore continues to be taken from this mine. On Saturday last the shaft was down 307 ft. The weather this week has been a mixture of snow, rain, and clear. It commenced raining early last evening, and continued heavily all night. To-day is pleasant.—*Alpine Chronicle*, Dec. 25.

ELECTRO-MAGNETIC TELEGRAPHS.—The invention of Mr. R. K BOYLE, of New York, consists in combining induction coils with a non-conducting and a conducting surface, with a battery in line of a telegraph and a chemical writing instrument, with local batteries and electro magnets, or with a needle telegraph, in such a manner that a constant current of electricity of either kind can be produced, that a continuous line will be drawn on the paper by the action of the line battery current, that a despatch transmitted to a receiving station over the main line will be transmitted over an additional line without the aid of an operator, or that whenever a signal is sent over a main line, clear and distinct marks are obtained for each signal, however feeble and rapid the electric waves may be.

FLYING MACHINE.—The invention of Mr. JOSEPH SIMMONS, of Regent street, has for its object the construction and working of a machine which will convey or carry into the air a human being or human beings, lights, beacons, or other adaptations for signalling, reconnoitering, surveying, or other purposes, by the pressure of wind upon its surface, with or without the employment or assistance of any other means of obtaining force.

MINING IN AUSTRALASIA—MONTHLY SUMMARY.

LADY ALICE.—The starting of the Lady Alice engines for pumping and clearing the mines was noticed. On Nov. 9 the ceremony of starting ten additional stamps heads was performed. The stamps cost about 320*l.*, including erection, and were imported from Ballarat, where they were purchased from the Band of Hope and Albion Consols Mining Company; they appear to work admirably. The Lady Alice Mine has turned out altogether since crushing was commenced 3200 ozs. of gold in round numbers, amounting to about 12,250*l.* Of copper something like 70 tons have been turned out, realising an average of 30*l.* per ton. The number of men employed on the mine is about 40, besides tribute and tutwork men. The old machinery and plant in January, 1874, cost 5053*l.* 9s. 3d., but additions have been made at various times since, making the cost altogether about 5500*l.* The manager of the mine reported on Nov. 16 that during the previous fortnight the stampers were working eight days, and the result was 51½ ozs. of gold from 125 tons of stuff, and about 3 tons of copper ore.

YORKE PENINSULA (local company).—With regard to the Paramatta Mine, Capt. J. Warren reports that the stopes in the back of the 62 south are producing 6 tons of 16 per cent. ore per fathom, and promise an increased yield. The ground in the 52 fm. level end, driving north of No. 4 shaft, has become very soft, and is letting out a quantity of water. They will now make better progress in driving, and he hopes it will lead to a discovery of ore. He expected the 150 tons of ore promised would be ready for sampling the following week. At the special meeting, on Dec. 2 (Hon. W. Parkin in the chair), to consider the propriety of declaring a dividend, and of requesting the directors, or any of them, to resign; it was shown that, making the balance-sheet and statement of assets and liabilities up to Nov. 27, there was a net surplus of 6628*l.* 8s. 7d., after deducting all liabilities and the amount of cost sheets.—The Chairman said that the board had carefully considered the position of the mine both from a directors' and shareholders' point of view, and they have resolved to pay a dividend of 1*l.* per share in December. The directors had desired to act cautiously and do their duty, so that the shareholders might be assured of further dividends. He then moved that a dividend of 1*l.* per share be paid out of the 6628*l.* 8s. 7d.—The motion was carried unanimously.—Mr. France said he did not doubt the honesty of any of the directors, but he had regretted to see the want of unanimity and concord which had existed on the board. The mine was likely to turn out a first-class property, and he did not think the frequent quarrels which had arisen amongst the directors were likely to be conducive to the interests of the shareholders. Upon that ground, therefore, he moved—"That this meeting has no confidence in the present directors."—The motion was unanimously carried; and the directors having been removed, Messrs. Richards, Bower, Neales, Wright, Reynell, and Hon. W. Parkin were elected; but the powers of the meeting being questioned, it was decided to hold another meeting after due notice.

KURILLA.—Satisfactory progress is making, and every month's work is substantially increasing in value as a progressive mine. The yield of ore for so young a mine is steadily on the increase. There are about 130 tons of superior ore now on the mine, and 70 tons have just been sold. This being the only mine on this Peninsula solely held by English capitalists, great anxiety is felt for its success, and the general hope is that Capt. Anthony, who has stuck to it through so many changes of fortune, may ultimately place it on the list of dividend colonial mines. There is a rumour afloat that the Duryea Mine is to be re worked by this company—a mine that held out great promise 12 years ago of being a prize, but was "knacked" for want of the means to explore the lode below the great deposit of mundic.

DOORA.—There is a considerable amount of ore on the floors and being sent away, but the continual low price of ore, and the high figure that has to be paid for materials, render it necessary that in the management of the mine every nerve should be strained in the endeavour to secure a profitable return.

WALLAROO.—The accounts from these mines are satisfactory. Port Wallaroo has not had so much shipping for years as there has been recently discharging or taking in cargo at the wharf, or lying at anchor in the stream. The unprecedented yield from the Wallaroo Mines has found cargoes for most of the vessels, and as fast as they have been discharged there has been ore for them to take in. The richer Moonta ore is preferred for local smelting, as a matter of course. As the extensive machinery imported per Pak Wan and otherwise is fixed we anticipate that the yield will be increased.

AUSTRALIAN MINES.

YORKE PENINSULA.—Capt. Anthony, Dec. 2: I have continued to drive the 35, east of Hall's shaft, on Kurilla lode. The lode varies from 2 to 4 ft. wide, and may be said to be improving every fathom we drive. Some rich stones of ore have been broken from time to time, but it is now worth 2 tons of 15 per cent. ore per fathom. In the 25, east of Hall's shaft, the lode is 3 ft. wide, and is not now yielding much ore, although until the last 4 ft. it has been worth 3 tons of 15 per cent. ore per fm. for the whole of the month. I expect soon to come upon ore again, having driven over the top of it at the 15 above. Six men continue to sink and timber the hauling shaft, which is now approaching completion to the 25. Should the 35 drain the lode in a line with this shaft I shall continue sinking with as little delay as possible, so as to draw the stuff from the 35 direct to surface, instead of wheeling it to Hall's shaft as now. I am boring a hole in the end of the 25 cross-cut from Kurilla lode, towards Anthony's lode. The cross cut is within about 9 ft. of Anthony's lode, that is assuming that it has about the same underlay northwards as the Kurilla lode. The said hole is in 4 ft. from the end of the cross-cut. There is both iron pyrites, quartz, and yellow copper ore contained in the "sludge," and there is a very free stream of water flowing from it. The trial pit in which Anthony's lode was found by costeaning is drained dry by this borehole. It is, therefore, evident that the lode holds down. Should solid ore be bored through it will be our interest to resume driving the cross-cut at once. The 15 cross-cut from Kurilla lode is holed to A shaft on Anthony's lode, and I am driving at the 15 west, on Anthony's lode. . . . . I have, as opportunity has presented, lengthened the other cross-cut at the 25, east of Hall's shaft, for the purpose of ascertaining the width of the Kurilla lode. It now shows the lode there to be 8 ft. wide, without the south wall being intersected. There is ore in the very end of the drive, and water still flows from some place further south. On Morphett's lode I continue to drive the 10 west; the lode is small, but it still carries ore, but the ore-bearing stratum and the ore along with it is dipping as we get further west. I have put men to deepen the workings on this lode. They are sinking trial pit No. 5, now over 10 fms. deep, with the object of pumping by a small wire-rope attached to Hall's, and afterwards to the new engine. It is just possible that this pumping apparatus will not immediately be required, as water is flowing very freely from the north side of the 25, east of Hall's, from the dividing planes, and the tributers are already down 13 fms. on Morphett's lode without finding water. If I can go down (say) 20 fms. dry it will enable us to prove the lode by a long drive at that level without engine-power there. . . . . Having so narrow a space some of my tributers have left me, but the number will increase shortly at the 25 and 35, east of Hall's. There are 14 men on tribute work, at an average of 9s. in 1*l.* . . . . . There have been sold 67½ tons of ore, realising 382*l.* 6s. 11d. net. In addition to that about 20 tons of rough and 40 of small ore have been sampled, to be sold by tender. The assays say roughs about 24½, and smalls 15¾ per cent. of copper. I have on hand about 70 tons of 15 per cent. ore. We have reached ore in the 35, east of Hall's, a little earlier than we had expected. I hauled yesterday from the 35, east of Hall's, the first ore of note—a pile of 3 tons of 15 per cent. This is encouraging, and I have no doubt we are entering on a good run of ground there.

PORT PHILLIP AND COLONIAL (Gold).—Quantity of quartz crushed for the four weeks ending Nov. 3, 3131 tons; pyrites treated, 18 tons: total gold obtained, 917 ozs. 9 dwts., or an average per ton of 5 dwts. 20½ grs. Receipts, 3597*l.* 3s. 9d. Payments (including 165*l.* 16s. 9d. paid for firewood and mine timber), 3300*l.* 17s. 11d. Profit, 296*l.* 5s. 10d., which, added to last month's balance of 1297*l.* 1s. 11d., made an available balance of 1593*l.* 7s. 2d., which was carried forward to next month's account.

ANGLO AUSTRALIAN.—Capt. Raisbeck, Nov. 30: Prospecting Shaft: Having had extra costs this month the men have been principally working in the stopes. We have worked the quartz up to the cross lode noticed in my last report, excepting a small block on the eastern part of our workings, which we are now taking out. For the reason above stated we have only driven the north drive 10 ft. The stone has improved a little. We have driven 12 ft upon the cross lode west of the north drive. I have not taken any of the stone down yet, as it is much cheaper to get it when uncovered for a distance. We have broken and crushed 103 tons of stone—result, 42 ozs. of retorted gold. I have 15 tons also in the mill. We have now got the engine into thorough working order, with very little extra cost. We have crushed for the public during the month 18 tons of quartz.——Mr. Clark, Dec. 1: If the balance increases for a month or two longer Capt. Raisbeck proposes to put on a few men in the 320 ft. level, but with the funds at present at our disposal we should scarcely be justified in doing so.

AUSTRALIAN CENTRAL.—Mr. Gill, Dec. 1: As previously mentioned, the work of the mine has been exclusively confined to opening up the ground from the new "jump-up" for the past month, and the yield of gold has of necessity been very small; now, however, the workings from No. 1 "jump up" are cleared from sand I anticipate obtaining good yields.——Capt. Angwin, Nov. 29: When I forwarded you my last report we had just struck the wash-dirt in the new "jump-up" shaft. Since then we have driven 70 ft. south of west, with wash-dirt 3 feet thick; the yield of gold from this drive is 24 ozs. 10 dwts., which is very satisfactory dirt.

ENGLISH AND AUSTRALIAN (Copper).—The manager (Port Adelaide, Dec. 4) says—Seven furnaces and one refinery were at work at the Port Adelaide Smelting Works. A further shipment of 75 tons copper had been made since last advices. The stock of coal at Port Adelaide was 3629 tons.

SCOTTISH AUSTRALIAN.—The directors have received advices from Sydney, dated Nov. 27, with reports from the Lambton Colliery to the 24th of that month. The sales of coal for the month of October amounted to 16,671 tons.